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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**Docket Number (Optional)  
8564-000041/US

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On May 3, 2007

Signature \_\_\_\_\_

Typed or printed name Gary D. YacuraApplication Number  
10/678,183Filed  
October 6, 2003First Named Inventor  
David Joseph KROPACZEKArt Unit  
2128Examiner  
Thai Q. Phan

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor

☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.  
Registration number 35,416

☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Signature

Gary D. Yacura  
Typed or printed name703.668.8000  
Telephone numberMay 3, 2007  
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of \_\_\_\_\_ forms are submitted.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: David Joseph KROPACZEK et al.  
Application No.: 10/678,183  
Filed: October 6, 2003  
Group: 2128  
Examiner: Thai Q. Phan  
For: METHOD AND APPARATUS FOR CREATING AND EDITING A  
NUCLEAR REACTOR LOADING TEMPLATE

Attorney Docket No.: 24GA5999 (HDP Ref.: 8564-000041/US)

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Alexandria, VA 22314  
**Mail Stop AF**

May 3, 2007

**REQUEST FOR PRE-APPEAL BRIEF CONFERENCE**

Sir:

In response to the Final Office Action mailed on January 3, 2007 ("Final Office Action") and the Advisory Action mailed on April 20, 2007 ("Advisory Action"), Applicants request that the Pre-Appeal Brief Review Board (hereinafter Board) review the pending rejections. The Reasons for Pre-Appeal Brief Request for Review are being filed concurrently with the Pre-Appeal Brief Request for Review and a Notice of Appeal.

Claims 1-8, 10, 11, and 13-16 are pending in the current Application and stand rejected. Claims 1 and 16 are independent claims.

**Rejection For Which Conference Is Requested**

A Pre-Appeal-Brief Conference is respectfully requested to review the rejection of claims 1-8, 10, 11 and 13-16 under 35 U.S.C. § 103(a) as obvious over US Pat. Pub. 2004/0196946 to Chao et al. ("Chao") in view of US Pat. 6,404,437 to Russell et al. ("Russell").

**I. THE EXAMINER HAS FAILED TO ESTABLISH PRIMA FACIE OBVIOUSNESS BECAUSE EACH ELEMENT OF THE CLAIMS IS NOT DISCLOSED IN THE APPLIED REFERENCES.**

Initially, please refer to Applicants' arguments on the record, particularly on pages 6-7 of the Amendment filed September 29, 2006 and pages 6-7 of the After Final Amendment filed April 3, 2007.

Claim 1

1. A method for creating a nuclear reactor core template, comprising:  
selectively assigning, using a graphical user interface providing a graphical representation of a nuclear reactor core, fuel bundle categories to fuel bundle positions in the graphical representation to create a template having as constraints that only a fuel bundle matching the assigned fuel bundle categories to the fuel bundle positions be allowed to be loaded in the fuel bundle position.

The Examiner states in the Final Office Action that Chao discloses a method similar to that of claim 1, with the exception of the "template," which the Examiner alleges is taught by Russell. Specifically, the Examiner alleges that Chao and Russell together teach both: 1) a method for producing a template with constraining fuel categories assigned to each position and 2) a method of doing so by user assignment. Applicants respectfully submit that the applied references teach neither.

With respect to creating a template with fuel categories assigned to each position in the template, Chao teaches the creation only of a final loading map indicating specific fuel bundles, not fuel bundle categories, assigned to each position. See Chao ¶¶ [0011], [0015], [0035] (indicating selection of a final loading pattern of "individual fuel assemblies"). To be clear, a final loading map is not a template with fuel bundle categories as recited in claim 1. The former is the final piece of information in the loading process, and the latter is an initial step in the loading process. Thus Chao does not teach or fairly suggest a template of fuel bundle categories

matched with each position in the template as recited in claim 1; rather, Chao teaches something quite different in the nuclear fuel reloading process.

Regarding the user assignment, Chao teaches a Branching and Bounding Batch Pattern Enumerated under Constraint program that refines large groups of assemblies into individually placed assemblies in the final loading map. *See* Chao ¶¶ [0025], [0026]. That is, no user assigns fuel bundles, let alone fuel categories as recited in claim 1, to individual positions in the template; only the B3PEC program so assigns in Chao. Thus Chao does not teach or fairly suggest the user assignment to create a template as recited in claim 1 but instead insists on a program for doing so.

The Examiner relies on Russell to supply the template of claim 1. The Examiner does not rely on Russell to supply the missing elements of Chao discussed above. Specifically, Russell is silent with regard to a template of fuel bundle categories as constraints on individual positions and user assignment of those categories to individual positions. Because Russell does not cure the disclosure and suggestion deficiencies of Chao, Russell and Chao, alone or in combination, cannot support a prima facie case of obviousness.

Because Chao lacks each and every element of claim 1 and suggests methods opposite of those in claim 1, and because Russell does not cure these disclosure and suggestion deficiencies of Chao, Chao and Russell do not render claim 1 obvious. Dependent claims 2-7, 10, 11, and 13-16 are allowable at least for depending from an allowable base claim 1. Applicants respectfully request the Board overturn the Examiner's rejection under 35 U.S.C. § 103(a).

## II. CONCLUSION

In view of the above, Applicants respectfully request that the Board overturn the § 103 rejection. In the alternative, Applicants respectfully request that the Board reopen examination and request the Examiner to provide proper references to support a prima facie case of obviousness.

Should there be any outstanding matters that need to be resolved in the present application, the Board is respectfully requested to contact the undersigned at the telephone number below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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